**PROPOSED CLAIM AMENDMENTS**:

1. (Currently amended) Method of producing a self-hardening bioabsorbable composite material, wherein

(i) a polymerisation initiator is immobilised with the aid of a first partial amount of an interconnectingly porous bioabsorbable inorganic bone regeneration material,

(ii) a polymerisation activator is immobilised with the aid of a second partial amount of the bone regeneration material according to (i) or of a different interconnectingly porous bioabsorbable inorganic bone regeneration material,

(iii) the components obtained in steps (i) and (ii) are mixed with a liquid or paste-form multi-functional monomer capable of polymerisation to form a biocompatible and bioabsorbable polymer or with a liquid or paste-form mixture of multi-functional monomers capable of polymerisation to form a biocompatible and bioabsorbable polymer, wherein at least one of the constituents mixed in is a water-soluble pore-forming substance which is added to the monomer, monomer mixture and/or the mixture thereof with the bone regeneration material in particulate form, and

(iv) the monomer or monomer mixture contained in the mixture produced is polymerised and the composite material is obtained;

wherein

calcium phosphate having a pore volume, accessible to the polymerisation initiator and/or the polymerisation activator, of 0.4 $cm^3/g$ or more, while retaining the integrity of the particles of the bone regeneration material and having the following characteristic data is used as the interconnectingly porous bioabsorbable inorganic bone regeneration material:

- pore diameters from 0.1 to 500 µm; ~~and/or~~

- particle sizes ($d_{50}$ values) of from 1 to 500 μm; and[[/or]]

- BET surface area of at least 0.1 $m^2/g$;

and where the polymerization initiator and polymerization activator are contained in the pores of the porous bioabsorbable inorganic bone regeneration material.

2. (Previously presented) Method according to claim 1, wherein in step (iii) one or more constituents which modify the properties of the monomer, monomer mixture and/or composite material are mixed in, which modifying constituents are selected from the group consisting of thickeners, diluents, polymeric fillers, porogens, pH-modifying substances, colourants, adhesion-imparting agents, and silicon compounds.

Claim 3 (Cancelled)

4. (Previously presented) Method according to claim 1, wherein at least one of the constituents mixed in is a substance which alters the viscosity of the monomer, the monomer mixture and/or the mixture thereof with the bone regeneration material.

5. (Previously presented) Method according to claim 4, wherein the substances altering the viscosity of the monomer, the monomer mixture and/or the mixture thereof with the bone regeneration material are oligomeric or polymeric derivatives of alpha-hydroxycarboxylic acids and/or are substances from the group of oligo- and poly-ethylene glycols.

6. (Previously presented) Method according to claim 4, wherein dianhydro-D-glucitol-bis(poly-D,L-lactide) is used as viscosity-increasing substance.

7. (Previously presented) Method according to claim 1, wherein at least one of the constituents mixed in is a substance which is water-soluble or which reacts with water to form water-soluble resultant products and which brings about a pH change in a water-containing medium.

Claim 8 (Cancelled)

9. (Previously presented) Method according to claim 7, wherein sodium hydrogen carbonate is used as water-soluble pH-modifying and pore-forming substance.

10. (Previously presented) Method according to claim 1, wherein at least one of the constituents mixed in is a substance which acts as an adhesion-imparting agent between the composite material and living hard tissue.

11. (Previously presented) Method according to claim 10, wherein hydroxyl-group-containing adhesion-imparting agents are used as adhesion-imparting agent.

12. (Previously presented) Method according to claim 1, wherein at least one of the constituents mixed in is a colourant or a contrast agent.

13. (Previously presented) Method according to claim 1, wherein at least one of the constituents mixed in is a pharmaceutical active ingredient or an active ingredient mixture.

14. (Previously presented) Method according to claim 13, wherein antibiotics, anti-inflammatories, growth factor proteins and/or cancerostatics are used as pharmaceutical active ingredients.

15. (Previously presented) Method according to claim 1, wherein the first partial amount and the second partial amount of the bone regeneration material are used in a ratio of from 1:10 to 10:1 and/or the polymerisation initiator and the polymerisation activator are immobilised with the respective partial amounts of the bone regeneration material in a ratio of from 1:10 to 10:1 (based on weight in each case).

16. (Previously presented) Method according to claim 1, wherein the bone regeneration material is used in the form of powder or granules.

17. (Previously presented) Method according to claim 1, wherein in step (i) a solution of the polymerisation initiator is added to the bone regeneration material, the solution is allowed to infiltrate the bone regeneration material, and afterwards the bone regeneration material is dried.

18. (Previously presented) Method according to claim 1, wherein a solution of the polymerisation initiator is mixed with the bone regeneration material in an amount of from 0.1 to 20 % by weight (solid initiator based on bone regeneration material).

19. (Previously presented) Method according to claim 1, wherein an organic peroxide is used as polymerisation initiator.

20. (Previously presented) Method according to claim 1, wherein, in step (ii) a melt or solution of the polymerisation activator is added to the bone regeneration material, the solution is allowed to infiltrate the bone regeneration material, and afterwards the bone regeneration material is dried.

21. (Previously presented) Method according to claim 1, wherein a solution of the polymerisation activator is mixed with the bone regeneration material in an amount of from 0.1 to 20 % by weight (solid activator based on bone regeneration material).

22. (Previously presented) Method according to claim 1, wherein one or more polymerisation activators are used which are selected from the group comprising N,N-bis(2-hydroxyethyl)-p-toluidine, N,N-dimethyl-p-toluidine, N,N-dimethyl-N,N-aniline, ascorbic acid and barbituric acid.

23. (Previously presented) Method according to claim 1, wherein the polymerisation initiator is used in the form of a solution and/or the polymerisation activator is used in the form of a solution and the solution(s) is/are allowed to be drawn up by the bone regeneration material completely or as far as possible and the excess not drawn up is removed before step (iii).

24. (Previously presented) Method according to claim 1, wherein inorganic bone regeneration material is selected from the group consisting of alpha-tricalcium phosphate, beta-tricalcium phosphate, octacalcium phosphate, calcium hydrogen phosphate, calcium orthophosphate and calcium pyrophosphate.

25. (Previously presented) Method according to claim 1, wherein the same bone regeneration material is used for the immobilisation of the polymerisation initiator as for the immobilisation of the polymerisation activator.

26. (Previously presented) Method according to claim 1, wherein the bone regeneration material for the immobilisation of the initiator and the bone regeneration material for the immobilisation of the activator differ from one another in their chemical and/or mineralogical nature.

27. (Previously presented) Method according to claim 1, wherein calcium phosphate having the following characteristic data is used as the interconnectingly porous bone regeneration material:
- pore diameters from 0.1 to 100 μm, and/or
- particle sizes ($d_{50}$ values) of from 5 to 300 μm.

28. (Previously presented) Method according to claim 1, wherein there is used calcium phosphate having a pore volume, accessible to the polymerisation initiator and/or the polymerisation activator, of from 0.4 to 3.3 $cm^3/g$, as the interconnectingly porous bone regeneration material, while retaining the integrity of the particles of the bone regeneration material.

29. (Previously presented) Method according to claim 1, wherein the calcium phosphate bone regeneration material is used in crystalline, partly crystalline, glassy or amorphous form.

Claim 30 (Cancelled)

31. (Previously presented) Method according to claim 1, wherein there is used, as the monomer or as monomers of the monomer mixture, a multi-functional oligomer having terminal methacrylate groups.

Claims 32-39 (Cancelled)

40. (Previously presented) Method according to claim 5, wherein the oligomeric or polymeric derivatives of alpha-hydroxycarboxylic acids are lactic and/or glycolic acid.

41. (Previously presented) Method according to claim 10, wherein methacrylic acid 2-hydroxyethyl ester is used as adhesion-imparting agent.

42. (Previously presented) Method according to claim 1, wherein an organic peroxide selected from the group consisting of dibenzoyl peroxide, lauroyl peroxide and acetone is used as polymerisation initiator.

43. (Previously presented) Method according to claim 1, wherein the monomer or monomers of the monomer mixture are selected from the group consisting of an oligomer of lactic acid, glycolic acid, delta-hydroxyvaleric acid, epsilon-hydroxycaproic acid, trimethylene carbonate and mixtures thereof.